

tive bodies; and last of all, of Animate ones, that seeming to be the highest step of natural knowledge that the mind of man is capable of.

Observ. XIV. Of several kinds of frozen Figures.

I Have very often in a Morning, when there has been a great *hoar-frost*, with an indifferently magnifying *Microscope*, observ'd the small *striae*, or *Crystalline beard*, which then usually covers the face of most bodies that lie open to the cold air, and found them to be generally *Hexangular prismatical* bodies, much like the long Crystals of *Salt-peter*, save onely that the ends of them were differing: for whereas those of *Nitre* are for the most part *pyramidal*, being terminated either in a point or edge; these of Frost were hollow, and the cavity in some seem'd pretty deep, and this cavity was the more plainly to be seen, because usually one or other of the six *parallelogram* sides was wanting, or at least much shorter then the rest.

But this was onely the Figure of the *Bearded hoar-frost*; and as for the particles of other kinds of *hoar-frosts*, they seem'd for the most part irregular, or of no certain Figure. Nay, the parts of those curious branchings, or *vortices*, that usually in cold weather tarnish the surface of *Glass*, appear through the *Microscope* very rude and unshapen, as do most other kinds of frozen *Figures*, which to the naked eye seem exceeding neat and curious, such as the Figures of *Snow*, frozen *Urine*, *Hail*, several *Figures* frozen in common *Water*, &c. Some Observations of each of which I shall hereunto annex, because if well consider'd and examin'd, they may, perhaps, prove very instructive for the finding out of what I have endeavour'd in the preceding Observation to shew, to be (next the *Globular Figure* which is caus'd by *congruity*, as I hope I have made probable in the sixth Observation) the most simple and plain operation of Nature, of which, notwithstanding we are yet ignorant.

I.

Several Observables in the six-branched Figures form'd on the surface of *Urine* by freezing.

Schem. 8.
Fig. 1.

1 The Figures were all frozen almost even with the surface of the *Urine* in the Vessel, but the bigger stems were a little prominent above that surface, and the parts of those stems which were nearest the center (a) were biggest above the surface.

2 I have observ'd several kinds of these Figures, some smaller, no bigger then a Two-pence, others so bigg, that I have by measure found one of its stems or branches above four foot long; and of these, some were pretty round, having all their branches pretty neer alike; other of them were more extended towards one side, as usually those very large ones were

